G – General
G1. These notes shall apply to all work in this set of drawings.
G2. It will be the responsibility of the contractor(s) to insure that all required permits are obtained and are in hand at the job site prior to the commencement of construction. Contractors shall abide by all conditions contained therein.
G3. Prior to commencement, the contractor shall provide a construction schedule for various site work elements so that site visits may be coordinated.
G4. Contractor shall furnish the owner with accurate certified record drawings showing all as–constructed work within 30 days of completion of the project. The surface water system shall include elevations and dimensions of control structures, weirs, inverts, manholes and volumes in storage ponds. Water and sewer system shall include location of all piped utilities, appurtenances and devices, elevations of manhole inverts, tops and pipe crossings. Drawings shall be certified by a Florida–registered land surveyor or professional engineer.
G5. Structure elevations controlling water levels shall be built to 1/8"± (0.01 ft); inverts and water control elevations shall be built to 1/4"± (0.02 ft). Assigned volumes are absolute minimums. All other tolerances shall be built to local jurisdiction or industry standards.
G6. The locations of existing utilities and storm drainage shown on plans have been field verified. However, it is the contractor's responsibility to re–verify the field locations of all utilities and to determine any possible conflicts prior to the start of any construction. Any delay or inconvenience to the contractor by the relocation of the various utilities shall be incidental to the contract and no extra compensation is allowed.
G7. The contractor shall immediately notify the engineer of any discrepancies found between the drawings and the field conditions prior to construction in the area impacted by the conflict.
G8. In accordance with Florida Law (553.851) the contractor must notify the gas or other utility a minimum of 48 hours and a maximum of five days prior to excavation. (Excluding weekends).
G9. All requirements and recommendations of inspection personnel other than the owner's shall be reported to the engineer/owner prior to implementation. Compensation will not be allowed for work which is not authorized by the engineer/owner.
G10. All work shall be open to and subject to inspection by authorized personnel of the utility companies, project engineer and regulatory agencies.
G11. Contractor shall notify all appropriate utility companies and water management agencies of proposed start up. All work shall be in accordance with their requirements; including but not limited to water, sewer, drainage, power, telephone, Gas and cable TV companies.
G12. Contractor shall stake all improvements using the centerline, building dimensions and pond dimensions. Contractor shall confirm the building dimensions with the drawings prior to stakeout. It is the contractors sole responsibility to completely stake and check all improvements to ensure adequate positioning, both horizontal and vertical, including minimum building setbacks prior to the installation of any improvement.
G13. All work on public right–of–way shall comply with FDOT applicable indexes and all local jurisdiction regulations. Disturbed areas shall be compacted to design density and sodded. Signs and barricades per FDOT and Manual of Uniform Traffic Control Devices.
G14. Contractor shall confirm compatibility of pipe slopes and inverts during shop drawing and materials ordering phase of project and advise engineer of any discrepancies.
G15. All fill shall be compacted to 98% of maximum density (AASHTO T–180), unless otherwise noted on the plans or in the specifications. . Recomendations of the Geotechnical Report are made part of the specifications and notations and shall be followed carefully. A copy of the report may be obtained from the Owner or Engineer.
G16. The concrete compressive strength for curb, gutter and flatwork shall be 3000 psi at 28 days (FDOT Class I). Provide concrete test cylinders and documentation.
G17. The contractor shall reference and restore property corners and land markers disturbed during construction (under the direction of a Florida registered land surveyor).
G18. All property affected by this work shall be restored to a condition equal to or better than existed unless specifically exempted by the plans. The cost for such restoration shall be incidental to other construction and no extra compensation will be allowed.
G19. Roadway markings and striping to be installed in accordance with FDOT index #17345 and local jurisdiction standards. Striping shall be coordinated with local jurisdiction standards.
G20. If seal coat is required on new pavement, temporary striping will be required until seal coat is applied (90 day curing time is required.)
G21. The contractor shall provide flag men and other traffic measures necessary to protect and facilitate traffic movement during construction.
G22. Maintenance of traffic shall conform to FDOT and local jurisdiction standards.

E – Erosion and Siltation Control
E1. A suitable perimeter silt fence shall be constructed and maintained for the duration of the project. The silt fence shall be built at the "silt fence line" as defined on the plans. Outlets and discharge points shall be protected with two layers of hay bales and filter cloth. Adjacent wetlands and open bodies of water, contractor must use a double fence separated by 5 feet.
E2. Sod all disturbed areas not shown as landscaping, slopes 6:1 or greater, swales, and ponds.
E3. Protect at all time against runoff or dewatering pollution of any downstream area or adjacent properties. Correct problems immediately.
E4. Retention/Detention facilities may be utilized for silt and erosion control providing they are desilted at the end of the job.
E5. Contractor is responsible for determining any areas which will require dewatering. A plan for carrying out the dewatering must be submitted to the engineer prior to construction. The contractor is responsible for all dewatering work, sizing of equipment, siltation basins and related work.
E6. The Contractor shall immediately correct any offsite damage caused either directly or indirectly from his actions, to an equal or better condition as judged by the Owners Engineer. This includes paying any restitution that may be assessed by the local regulatory agencies.
E7. Provide temporary soil stabilization within seven days to denuded area not at final grade.

P – Pavement, Bituminous and Concrete
Minimum standards are described by the current or latest FDOT specifications. Thicknesses are minimum unless designated otherwise on plans or in specs.
P1. Asphaltic Wearing Surface – use hot mixed bituminous concrete. Use Type S–1 on ROW; match existing type and thickness (1–1/2 inches min.) Use Type S–3 on project (1 inch min.) Provide hot mix bituminous pavement design mix by certified testing laboratory per FDOT standards using Marshall Stability test methods.
P2. Limerock Base Course – use limerock with minimum LBR of 100. Compact to 98% Modified Proctor density (AASHTO T–180).
P3. Stabilized Subgrade – Minimum Florida Bearing Value (FBV) of 60 psi or LBR of 40%. Compact to 98% modified proctor density (AASHTO T–180). Thickness as specified, (12 inches min.)
P4. Alternate Concrete Pavement: Minimum Thickness 6". All concrete 3,000 psi @ 28 day strength Portland Cement Type I with fibermesh. Unless otherwise indicated all concrete to be placed over 12" Stabilized Subgrade per P3.
P5. Seal Coat – If specified, use Jennite–16 or equal. Allow 90 days curing time for hot mix prior to applying seal coat. Note that temporary parking striping will be required during curing time with final parking striping to be completed after application of seal coat.

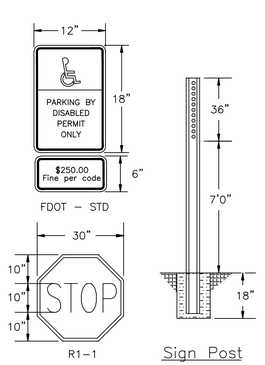
S – Storm Sewer Systems
S1. Storm Sewer pipe shall be reinforced conc ASTM–C–76– class III, joints tongue & groove mortar joint, PVC ASTM D3034 (SDR 35), Rubber gasket joint or PE pipe smooth bore polyethylene meeting AASHTO type S (M252, M294), installed per ASTM D2321. ("ADS"– N12 or equal)
S12. Storm manholes, inlets and appurtenances shall be precast or built–up reinforced concrete meeting FDOT standard index #200 and 201.

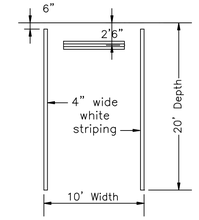
S – Sanitary Sewer Systems
S1. Sanitary sewer lines shall be PVC pipe ASTM–D–3034 (SDR35). Joints shall be rubber sealing ring, ASTM–D–3212.
S2. Force main lines and fittings 3" and larger shall be AWWA C–900 (SDR 18).. Force main lines and fittings smaller than 3" shall utilize PVC SCH 40. All Force Main lines shall meet water system specifications.
S3. Sanitary manholes shall be precast box or pipe meeting ASTM C76 (type II cement), t&g joint (ram neck or O–ring) shaped invert, water tight, epoxy paint inside and out.
S4. Manhole frames and covers, and inlets to be cast iron meeting ASTM 48, with name of service cast on cover.
S5. Pipes shall be lamped and flushed, satisfactory to local jurisdiction.
S6. Provide leakage test and report, max allowable is 50 gallons/day/inch diameter/mile.
S7. SUBMIT ALL MATERIAL AS SHOP DRAWINGS PRIOR TO USE. INCLUDE SPECS AND CERTIFICATIONS "AS EQUAL" FOR APPROVAL.

W – Water System
W1. Domestic water system material shall be suitable for working pressure of 150 psi, bell and spigot with elastomeric ring joint. All components must be acceptable and meet requirements of the local utility jurisdiction. PVC pipe shall be AWWA C–900, (DR18). Ductile iron pipe shall be AWWA Class 50. Valves, bfps, hydrants and fittings shall be AWWA Class 250. PVC pipe less than 4" diam shall be 200 psi class. Hydrant assemblies, and backflow preventors, etc. shall have fully restrained joints.
W2. Fire protection devices, piping (SDR 14), fittings etc. must meet all requirements of NFPA 24 and be UL and FM approved, restrained joints, and meet 200 psi working pressure.
W3. Minimum cover is 36 inches. Provide locator wire (12ga cu) on non conductive pipe.
W4. Provide location, type, color, lettering and encasement in accordance with requirements of utility jurisdiction. Paint all piping and appurtenances above ground. Verify permissible colors.
W5. All PVC pipe shall bear the National Sanitation Foundation (NSF) seal of approval for potable water pipe.
W6. Field verify location of existing utilities prior to beginning construction.
W7. The Contractor shall notify utility 72 hours before beginning any construction.
W8. SUBMIT ALL MATERIAL AS SHOP DRAWINGS PRIOR TO USE. INCLUDE SPECSAND CERTIFICATIONS "AS EQUAL" FOR APPROVAL.
W9. All mains shall be hydrostatically tested and disinfected in accordance with AWWA Manual M23 and C651, respectively. Maximum leakage rates shall be met.(four–gpd/inch/mile) Provide documentation of pressure test and bacteriological tests (two tests on consecutive days)
W10. NEW CONSTRUCTION MAY NOT BE PUT INTO SERVICE UNTIL CLEARANCE LETTER FROM FDEP IS IN HAND.

D – Disinfection When Cutting Existing Water Mains
D1. Comply with recommendations of AWWA C651–92 section 10.
D2. Apply hypochlorite liberally as trench treatment.
D3. Apply hypochlorite to interior of all piping, fittings and parts and flush thoroughly. When practical isolate work and slug chlorinate as recommended by AWWA C651–92.

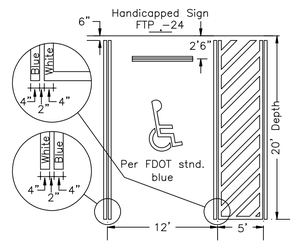
U – Utility Separation Statement
New or relocated, underground water mains shall be laid to provide a horizontal distance of at least six feet, and preferably ten feet, between the outside of the water main and the outside of any existing or proposed gravity– or pressure–type sanitary sewer, wastewater force main, or pipeline conveying reclaimed water not regulated under Part III of Chapter 62–610, F.A.C. The minimum horizontal separation distance between water mains and gravity–type sanitary sewers shall be reduced to three feet where the bottom of the water main is laid at least six inches above the top of the sewer. New or relocated, underground water mains crossing any existing or proposed gravity– or vacuum–type sanitary sewer shall be laid so the outside of the water main is at least six inches, and preferably 12 inches, above or at least 12 inches below the outside of the other pipeline. However, it is preferable to lay the water main above the other pipeline. At the utility crossings described above, one full length of water main pipe shall be centered above or below the other pipeline so the water main joints will be as far as possible from the other pipeline. Alternatively, at such crossings, the pipes shall be arranged so that all water main joints are at least three feet from all joints in vacuum–type sanitary sewers, or pipelines conveying reclaimed water regulated under Part III of Chapter 62–610, F.A.C., and at least six feet from all joints in gravity– or pressure–type sanitary sewers, wastewater force mains, or pipelines conveying reclaimed water not regulated under Part III of Chapter 62–610, F.A.C.





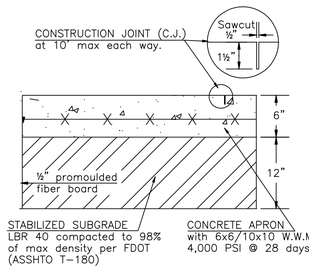
Parking Striping

Note:
If seal coat is required on new pavement, temporary striping will be required until seal coat is applied (90 day curing time is required.)

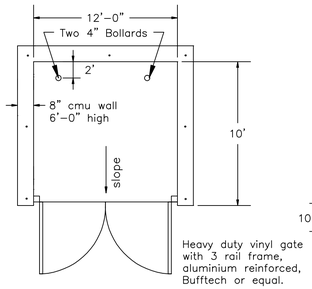


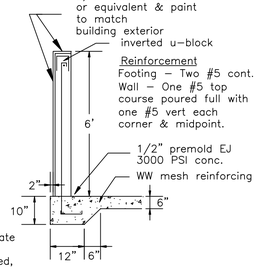
HDCP Parking Striping

Conform to local jurisdiction standards

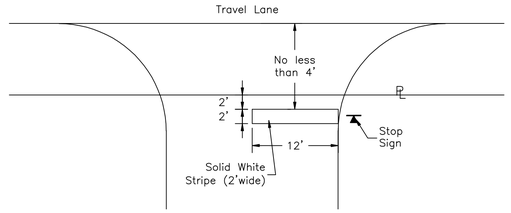


Pavement – Concrete Driveway

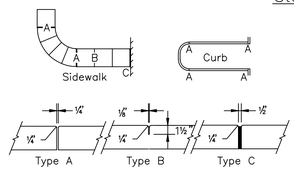


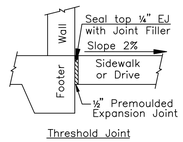


Dumpster Enclosure – Concrete



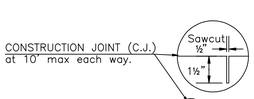
Stop Bar





Threshold Joint

Table of Sidewalk Joints	
Type	Location
A	Use at ends of curves & junction of existing and new concrete
B	5' center to center on sidewalks
C	Where concrete abuts existing structures and at 50' min

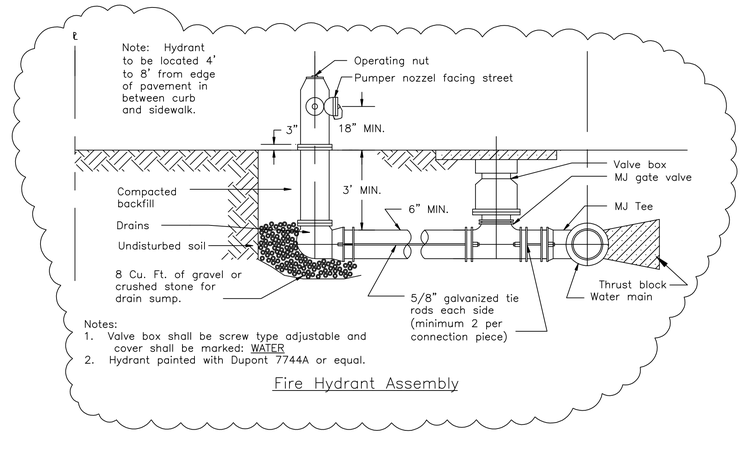


Sidewalk & Curb Jointing

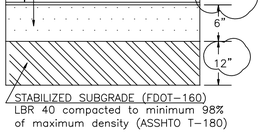
Conc. Pads & Walks with footers

Notes:
1. All concrete to be 3,000 psi @ 28 days unless shown otherwise.
2. All walks and pads to be 4" thick unless shown otherwise.
3. Concrete driveway crossings to be 6" thick unless shown otherwise.

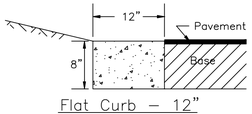
Concrete Curb, Sidewalk & Pad Details



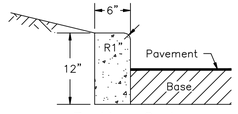
Fire Hydrant Assembly



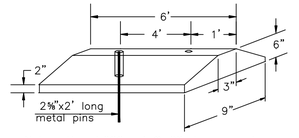
Pavement – Flexible Bituminous



Flat Curb – 12"



Parking Curb



Note: Use 4,000 psi @ 28 day concrete

Wheel Stop – Concrete

#	Date	Description
2	01/09/08	County Comments
1	12/18/07	County Comments

Revisions

Unroe Engineering, Inc
Civil Engineering/Planning/Scientific Evaluation
1507 Park Center Dr Unit 1C, Orlando, Florida 32835
Business Authorization Number - EB 0006579 ph (407) 299-0650

Specifications & Details

BE Village Plaza - Preliminary/Engineering
2953 E County Rd 48, Sumter County, Florida

DP	Drawn
DP	Checked
-----	Scale
08/08/07	Date
VEVC4	File

Dwg. No.
C4
4 of 7

Darcy Unroe PE 60929